I. AMENDMENTS

AMENDMENTS TO THE CLAIMS

Cancel claims 2 and 4 without prejudice to renewal.

Please enter the amendments to claims 1, 3, 6-8, 13-16, 18, 20, and 21, as shown below.

1. (Currently amended) A non-human transgenic ~~animal~~ mammal comprising a transgene encoding a fatty acid desaturase, wherein a tissue of said mammal comprises a level of monounsaturated fatty acids (MUFA) that is at least 5% higher than the level of MUFA in the same tissue of a non-transgenic mammal of the same species.

2. (Canceled)

3. (Currently amended) The transgenic non-human animal according to Claim 1 [[2]], wherein said mammal is an ungulate.

4. (Canceled)

5. (Original) The transgenic non-human animal according to Claim 1, wherein said transgene is chromosomally integrated.

6. (Currently amended) The transgenic non-human ~~animal~~ mammal according to Claim 1, wherein said transgene comprises a ~~coding~~ nucleotide sequence [[for]] encoding a stearoyl-CoA desaturase operably linked to an animal tissue specific promoter.

7. (Currently amended) The transgenic non-human ~~animal~~ mammal according to Claim 6, wherein said animal tissue specific promoter is a mammary specific promoter.

8. (Currently amended) The transgenic non-human ~~animal~~ mammal according to Claim 6, wherein said animal tissue specific promoter is an intestinal epithelium specific promoter.

9. (Withdrawn) An expression cassette comprising a coding sequence for a stearoyl-CoA

desaturase operably linked to a heterologous mammalian tissue-specific promoter.

10. (Withdrawn) The expression cassette according to Claim 9, wherein said heterologous tissue specific promoter is a mammary specific promoter.

11. (Withdrawn) The expression cassette according to Claim 9, wherein said heterologous tissue specific promoter is an intestinal epithelium specific promoter.

12. (Withdrawn) The expression cassette according to Claim 9, wherein said expression cassette is present in a vector.

13. (Currently amended) A method for producing a non-human transgenic mammal of claim 1 ~~animal comprising a fatty acid desaturase transgene~~, said method comprising:

(a) introducing a desaturase transgene into a single-celled embryo, forming a genetically modified embryo; and

(b) transferring the genetically modified embryo into a recipient female of the same species as the embryo, wherein the genetically modified embryo develops into a transgenic ~~animal~~ mammal in the female.

14. (Currently amended) The method according to Claim 13, wherein said transgenic ~~animal~~ mammal is chosen from a mouse, a rat, a rabbit, a pig, a sheep, a goat, ~~poultry,~~ and a cow.

15. (Currently amended) The method according to Claim 13, wherein ~~the transgenic animal is a mammal, and~~ said transgene is expressed in mammary gland cells of said mammal.

16. (Currently amended) The method according to Claim 13, wherein ~~the transgenic animal is a mammal, and wherein~~ said transgene is expressed in intestinal epithelium cells of said mammal.

17. (Original) The method according to Claim 13, wherein the desaturase transgene is a stearoyl-CoA desaturase transgene.

18. (Currently amended) A method for producing a non-human transgenic mammal according to claim 1 ~~animal comprising a fatty acid desaturase transgene~~, said method comprising:

a) introducing a desaturase transgene into a mammalian somatic cell, forming a genetically modified somatic cell comprising a genetically modified nucleus;

b) transferring the genetically modified nucleus from the genetically modified somatic cell into a single-celled embryo, generating a genetically modified single-celled embryo; and

c) transferring the genetically modified single-celled embryo into a recipient female of the same species as the embryo, wherein the genetically modified embryo develops into a transgenic ~~animal~~ mammal in the female.

19. (Original) The method of claim 18, wherein the desaturase transgene is a stearoyl CoA desaturase transgene.

20. (Currently amended) A method of producing a food product, said method comprising harvesting a food product from a non-human transgenic ~~animal~~ mammal of Claim 1.

21. (Currently amended) A method of producing a food product, the method comprising processing a food product harvested from a non-human transgenic ~~animal~~ mammal of Claim 1.

22. (Withdrawn) A food product harvested from a non-human transgenic animal of Claim 1.

23. (Withdrawn) The food product according to Claim 22, wherein the food product is processed.

24. (Withdrawn) The food product according to Claim 22, wherein said food product is milk.

25. (Withdrawn) The food product according to Claim 22, wherein said food product

is meat.

26. (Withdrawn) The food product according to Claim 22, wherein said food product is an egg.

27. (Withdrawn) The food product according to Claim 22, wherein the food product has from about 10 to about 67 weight percent saturated fatty acids.

28. (Withdrawn) The food product according to Claim 22, wherein the food product has from about 27 to about 80 weight percent monounsaturated fatty acids.

29. (Withdrawn) The food product according to Claim 22, wherein the food product has from about 7.5 to about 25 weight percent polyunsaturated fatty acids.

30. (Withdrawn) The food product according to Claim 22, wherein the food product has from about 0.400 to about 50 weight percent conjugated linoleic acid.

31. (New) The transgenic mammal of claim 1, wherein said mammal is a female that produces milk comprising a level of monounsaturated fatty acids (MUFA) that is at least 5% higher than the level of MUFA in milk produced by a non-transgenic mammal of the same species.

32. (New) The transgenic mammal of claim 1, wherein a tissue of said mammal comprises a level of polyunsaturated fatty acids (PUFA) that is at least 5% higher than the level of PUFA in the same tissue of a non-transgenic mammal of the same species.

33. (New) The transgenic mammal of claim 1, wherein said mammal is a female that produces milk comprising a level of polyunsaturated fatty acids (PUFA) that is at least 5% higher than the level of PUFA in milk produced by a non-transgenic mammal of the same species.

34. (New) The transgenic mammal of claim 1, wherein a tissue of said mammal comprises a level of saturated fatty acids (SFA) that is at least 5% lower than the level of SFA in the same tissue of a non-transgenic mammal of the same species.

35. (New) The transgenic mammal of claim 1, wherein said mammal is a female that produces milk comprising a level of saturated fatty acids (SFA) that is at least 5% lower than the level of SFA in milk produced by a non-transgenic mammal of the same species.

36. (New) The transgenic mammal of claim 1, wherein said mammal is chosen from a goat, a cow, and a sheep.

37. (New) The transgenic mammal of claim 1, wherein a tissue of said mammal comprises a level of conjugated linoleic acid (CLA) that is at least 5% higher than the level of CLA in the same tissue of a non-transgenic mammal of the same species.

38. (New) The transgenic mammal of claim 1, wherein said mammal is a female that produces milk comprising a level of conjugated linoleic acid (CLA) that is at least 5% higher than the level of CLA in milk produced by a non-transgenic mammal of the same species.

39. (New) The transgenic mammal of claim 7, wherein the mammary gland-specific promoter is a β-lactoglobulin promoter.

40. (New) The transgenic mammal of claim 7, wherein the mammary gland-specific promoter is a β-casein promoter.

41. (New) The transgenic mammal of claim 7, wherein the mammary gland-specific promoter is an αS1-casein promoter.

42. (New) The transgenic mammal of claim 7, wherein the mammary gland-specific promoter is an αS2-casein promoter.

43. (New) The transgenic mammal of claim 7, wherein the mammary gland-specific promoter is a whey acid protein promoter.